Software Release Notice

System: AGS, SGS   **Release:** NASA 4.2
Date: December 18, 2000 4:24 PM

<u>**Modification Description:**</u>

Upgrade for Alaska (Poker Flats) and Svalbard Ground Stations

The following changes are planned for the Alaska (Poker Flats) and Svalbard Ground Stations software. Modifications that have been completed since the NASA 4.1 release:

1. Provides better frequency resolution for uplink.

2. Eliminates spikes on the Track Analysis graph due to improper time stamping.

3. Properly sets the switch during G/T automated test.

4. Changes the sysdflt.ascii file for support of ICESAT.

5. Updates the release version number.

<u>**Files Affected:**</u>

The files that were developed and/or utilized as part of NASA 4.2 are listed in Attachment 1:
NASA 4.2 FILES.

<u>**Hardware Requirements:**</u>

N/A

<u>**Validation Procedures:**</u>

NASA 4.2 with ATS 3.3 software or later by connecting to the SCC software and performing all the actions need for system operation including login, upgrade, load ephemeris, load schedule, retrieve pass results file. In addition, please perform the following individual tests:

Provides better frequency resolution for uplink
Run an uplink using the EO-1 Configured Frequency for the hp8780 of 2090.659999. Notice that when the uplink is complete, that the hp8780 is tuned to the same frequency.   Try the same test with different configuration files, some coherent, some non-coherent and with several different uplink frequencies. For each test, run a pass or simulated pass, let the computer perform the sweep function for each pass or simulated pass, then verify the displayed and output frequencies match the entered (configuration) values.

Eliminates spikes on the Track Analysis graph due to improper time stamping

Perform a track analysis on several passes. Notice the absence of large spikes on the graphs. Hit the fit plot button and notice that the graphs converge and display azimuth and elevation bias for plots where there is signal strength.

Properly sets the switch during G/T automated test

On the G/T Test Configuration Screen select a channel for the Power Meter. Upon closing the screen, notice that the hp3488 switch has been properly set for that channel. Repeat the test again for a different channel. Run a G/T Test on multiple channels and find that as the test runs and selects a channel, it controls the 3488 switch correctly and computes a result which is in the range of results expected for that channel.

Changes the sysdflt.ascii file for support of ICESAT

On the X-Band Channel Screens for both Control/Status and Configuration, notice that the third selection for bit sync is ICESAT instead of JERS. Notice this change on all four X-Band Screens. Run a Bit Error Test on a channel, which has slot three selected. Notice that the Test Modulator settings match AQUA and that the bit rate is set to 20Mbps. Run the Bit Error Test on LS7 and notice that it still functions correctly.

<u>**Known Bugs or Limitations:**</u>

Some open DRs may not be resolved in this release due to equipment constraints.
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Installation Procedure:

To install this release, first check to see that there is adequate disk space available by typing bdf. There should be at least 150MB available. If not, back-up to tape and then delete old unused releases in the /home/aaas/releases directory. Create a rel4.2 directory in the /home/aaas/releases directory. Copy nasa4.2.tar.Z in to this directory. From /home/aaas/releases/rel4.2. Uncompress and untar nasa4.2. This will create a bin directory with the new executables.

Create new etc directory and copy all the contents of rel4.1/etc to the rel4.2/etc directory. Modify the bin and etc links under /aaas/ to look at the new release directories.

Copy winPrint and pcltrans (if it exists) from rel4.1/bin to rel4.2/bin. Run a diff between NasaStart in rel4.1/bin and rel4.2/bin. If there are differences then copy the NasaStart from rel4.1/bin into rel4.2/bin.

Rename the rel4.1/etc tapelog files, ephtxt.txt and the config directory. Then create links of those files and directory to rel4.2/etc/. By creating those links then the configuration files are kept up to date no matter what release of software is activated.

Create a script called sw4.1 which will remove the links under /aaas/ for bin and etc and restore them to rel4.1/bin and rel4.1/etc. Create a script called sw4.2 which will remove the links under /aaas/ for bin and etc and link them to rel4.2/bin and rel4.2/etc.

Please call us for editing the etc/sysdflt.ascii file for ICESAT.

Activation Procedure:

SCC 4.2 activation procedure is used when switching from release 4.1 to 4.2 after the installation procedure is performed above (must be installed with ATS 3.3 or later) :
(1) Select option "Exit" from the "Session" menu. This action will close
the SCC graphical user interface (GUI) and stop all SCC processes.
Processes are stopped after "Stopping rci_client", "Stopping rci_server"
and "Removing Stale Message Queues" messages are displayed. Hit "enter" to
display the SCC command prompt, "ags11m-1 or sgs11m-1 >".

(2) Type "sw4.2" to switch to SCC release 4.2. Type "Start" to start
the SCC processes. The SCC GUI main window will show "NASA Version 4.2".

Reversion Procedure:

SCC 4.1 reversion procedure (must be installed with ATS 3.3 or later) is used to revert back to release 4.1 after the installation procedure is performed above and after release 4.2 is activated:
(1) Select option "Exit" from the "Session" menu. This action will close
the SCC graphical user interface (GUI) and stop all SCC processes.
Processes are stopped after "Stopping rci_client", "Stopping rci_server"
and "Removing Stale Message Queues" messages are displayed. Hit "enter" to
display the SCC command prompt, "ags11m-1 or sgs11m-1 >".

(2) Type "sw4.1" to switch to SCC release 4.1. Type "Start" to start the
SCC processes. The SCC GUI main window will show "NASA Version 4.1".

Documentation Affected:

N/A

Comments:

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Approval:

The software modifications described in this release notice has been validated and accepted.

_____   _____
                    NASA AGS Project Manager   Date

_____   _____
                    NASA SGS Project Manager   Date

SOFTWARE RELEASED:

The software modifications described in this release notice have been completed and released to ground station operations.
_____   _____
                    System Manager   Date

_____   _____
                    NASA Program Monitor   Date

Attachment 1
NASA 4.2 Files

The bin Directory:
```
AntennaControlStartup
Displays
Nasa
NasaStart
Start
Stop
authent
configud
control
dpsHndlr
errhandler
eup
executive
file.lst
getNtpSyncInfo
ioh
pcltrans
pedcont
postPassShell
rci
reccon
recsch
resetLANGateway
rmqs
schedmon
snyHndlr
start.awk
start_ntp
status_l
stop.awk
stop_ntp
sup
tapelog
terminal
testexec
time_code_handler
track
uactask
winPrint
```

The etc Directory:
Change sysdflt.ascii for ICESAT.

The etc/hpib directory:
N/A

The etc/config directory:
N/A

The etc/defaults directory:
N/A